KOLAR Document ID: 1772102

Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 30717
Name: Downing-Nelson Oil Co Inc
Address 1: PO BOX 1019
Address 2:
City: HAYS State: KS Zip: 67601 + 1019
Contact Person: Alan Downing
Phone: (785) 621-2610
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Marc Downing
Purchaser: CHS McPherson

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover
☑ Oil ☐ WSW ☐ SWD
☐ Gas ☐ DH ☐ EOR
☐ OG ☐ GSW
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: Original Total Depth:
☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ EOR Permit #:
☐ GSW Permit #:

02/26/2024 Spud Date or Recompletion Date
03/08/2024 Date Reached TD
04/15/2024 Completion Date or Recompletion Date

API No.: 15-153-21324-00-00
Spot Description:
SE - NW - SE - NW Sec. 27 Twp. 4 S. R. 36 ☐ East ☑ West
1955 Feet from ☑ North / ☐ South Line of Section
1660 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Rawlins
Lease Name: HFI Well #: 1-27
Field Name:
Producing Formation: Cherokee Lime
Elevation: Ground: 3358 Kelly Bushing: 3369
Total Vertical Depth: 4988 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 478 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 8000 ppm Fluid volume: 160 bbls
Dewatering method used: Evaporated
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT
I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY
☐ **Confidentiality Requested**
Date: 05/30/2024
☐ **Confidential Release Date:** 05/30/2026
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Kelsey Cox **Date:** 05/30/2024

Page Two

Operator Name: Downing-Nelson Oil Co Inc Lease Name: HFI Well #: 1-27

Sec. 27 Twp. 4 S. R. 36 ☐ East ☑ West County: Rawlins

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken *(Attach Additional Sheets)*	☑ Yes	☐ No	
Samples Sent to Geological Survey	☑ Yes	☐ No	
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☑ Yes	☐ No	
Geologist Report / Mud Logs	☑ Yes	☐ No	

List All E. Logs Run: Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	478	H-325	325	-
Production	7.875	5.5	14	4948	H-Long	200	-

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ Plug Off Zone	-			
	-			

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/ Injection: 05/03/2024	Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*					
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity	

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:	
		Top	Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	4706	4712

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
4	4706	4712			500 gallons 15% Mud Acid

TUBING RECORD:	Size:	Set At:	Packer At:	
	2.375	4880		

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	HFI 1-27
Doc ID	1772102

All Electric Logs Run

Micro
Sonic
Compensated Density Neutron
Dual Induction

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	HFI 1-27
Doc ID	1772102

Tops

Name	Top	Datum
Top Anhydrite	3106'	+263
Base Anhydrite	3143'	+226
Foraker	3770'	-401
Topeka	4047'	-678
Heebner	4210'	-841
LKC	4256'	-887
Stark	4455'	-1086
BKC	4505'	-1136
Pawnee	4628'	-1259
Cherokee Shale	4704'	-1335
Morrow	4860'	-1491
Mississippi	4924'	-1555

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	HFI 1-27
Doc ID	1772102

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	478	H-325	325	-
Production	7.875	5.5	14	4948	H-Long	200	-

CEMENT TREATMENT REPORT

Customer:	Downing Nelson	**Well:**	HFI #1-27	**Ticket:**	WP 5167
City, State:	Brewster KS	**County:**	Rawlins KS	**Date:**	2/27/2024
Field Rep:	Amelio	**S-T-R:**	27-4S-36W	**Service:**	Surface

Downhole Information	
Hole Size:	12 1/4 in
Hole Depth:	485 ft
Casing Size:	8 5/8 in
Casing Depth:	463 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	29.2 bbls

Calculated Slurry - Lead	
Blend:	H-325
Weight:	14.8 ppg
Water / Sx:	6.9 gal / sx
Yield:	1.41 ft^3 / sx
Annular Bbls / Ft.:	0.0735 bbs / ft.
Depth:	463 ft
Annular Volume:	34.0 bbls
Excess:	
Total Slurry:	81.6 bbls
Total Sacks:	325 sx

Calculated Slurry - Tail	
Blend:	
Weight:	ppg
Water / Sx:	gal / sx
Yield:	ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	0.0 bbls
Total Sacks:	0 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
3:00 AM			-	-	Arrived on location
3:10 AM				-	Safety meeting
3:20 AM				-	Rigged up
5:05 AM				-	Casing on bottom
5:10 AM				-	Circulated mud
5:20 AM	3.0	200.0	5.0	5.0	Water ahead
5:27 AM	4.0	400.0	81.6	86.6	Mixed 325 sacks H-325 cement @ 14.8 ppg
5:53 AM	3.2	300.0	29.2	115.8	Begin displacement
6:02 AM		200.0		115.8	Plug down and shut in with 5 bbls/20 sacks cement circulated to pit
6:04 AM				115.8	Washed up and rigged down
6:25 AM				115.8	Left location

	CREW	**UNIT**
Cementer:	John	947
Pump Operator:	Craig	230
Bulk #1:	Robbie	538-530
Bulk #2:	Michael	

SUMMARY		
Average Rate	Average Pressure	Total Fluid
3.4 bpm	275 psi	116 bbls

CEMENT TREATMENT REPORT

Customer:	DOWNING NELSON	**Well:**	HFI 1-27	**Ticket:**	WP 5200
City, State:	MCDONALD,KS	**County:**	RAWLINS,KS	**Date:**	3/8/2024
Field Rep:	JUAN	**S-T-R:**	SEC.27-4S-36W	**Service:**	LONGSTRING

Downhole Information	
Hole Size:	5 1/2 in
Hole Depth:	4989 ft
Casing Size:	7 7/8 in
Casing Depth:	4948 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	117.0 bbls

Calculated Slurry - Lead	
Blend:	H-LONG
Weight:	15.0 ppg
Water / Sx:	6.2 gal / sx
Yield:	1.36 ft^3 / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	4989 ft
Annular Volume:	154.2 bbls
Excess:	
Total Slurry:	48.4 bbls
Total Sacks:	200 sx

Calculated Slurry - Tail	
Blend:	H-PLUG A
Weight:	13.8 ppg
Water / Sx:	6.9 gal / sx
Yield:	1.42 ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	12.6 bbls
Total Sacks:	50 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
3:30 PM			-	-	ARRIVE ON LOCATION EARLY DO TO WEATHER ISSURE
4:45 PM				-	RIG UP SAFETY MEETING
9:50 PM				-	RUNNING FLOAT EQUIMENT
1:45 AM				-	CASING ON BOTTON
3:19 AM	2.0	40.0	7.5	7.5	MH 30SKS H-PLUGCMT@13.8PPG
3:21 AM	2.0	20.0	5.0	12.5	RH 20SKS H-PLUGCMT@13.8
3:23 AM	5.0	250.0	5.0	17.5	FW SPACER 5BBL
3:25 AM	2.0	250.0	12.0	29.5	12.0BBL MUD FLUSH
3:27 AM	2.0	240.0	5.0	34.5	FW SPACER 5BBL
3:28 AM	5.0	270.0	48.4	82.9	H-LONG CMT @15.0PPG 48.4
3:50 AM				82.9	CLEAR LINES
3:57 AM					DROP PLUG
3:58 AM	6.5	350.0			DISPLAEMENT 117BBL
4:15 AM	3.0	1,600.0			5MIN HOLE CHECK FLOATS BUMP PLUG 1100 500 OVER
4:30 AM		-			1.0BBL BACK 5BBL CMT 10SKS
4:33 AM					WASH UP PUMP
4:50 AM					RIG DOWN
5:15 AM					DEPART LOCATION

	CREW	UNIT
Cementer:	ROGER GASTON	945
Pump Operator:	JOHN POLLEY	208
Bulk #1:	ROBBIE NOAH	194-254
Bulk #2:		

SUMMARY		
Average Rate	Average Pressure	Total Fluid
3.4 bpm	336 psi	83 bbls

ftv: 13-2021/01/19
mplv: 444-2024/03/04

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

HFI #1-27

27-4s-36w Rawlins, KS

Start Date: 2024.03.02 @ 19:42:00
End Date: 2024.03.03 @ 03:30:51
Job Ticket #: 70946 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.03.07 @ 12:42:19

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70946 **DST#: 1**

Test Start: 2024.03.02 @ 19:42:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "A"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:16:21
Time Test Ended: 03:30:51

Test Type: Conventional Bottom Hole (Initial)
Tester: James Winder
Unit No: 73

Interval: 4208.00 ft (KB) To 4274.00 ft (KB) (TVD)
Total Depth: 4274.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

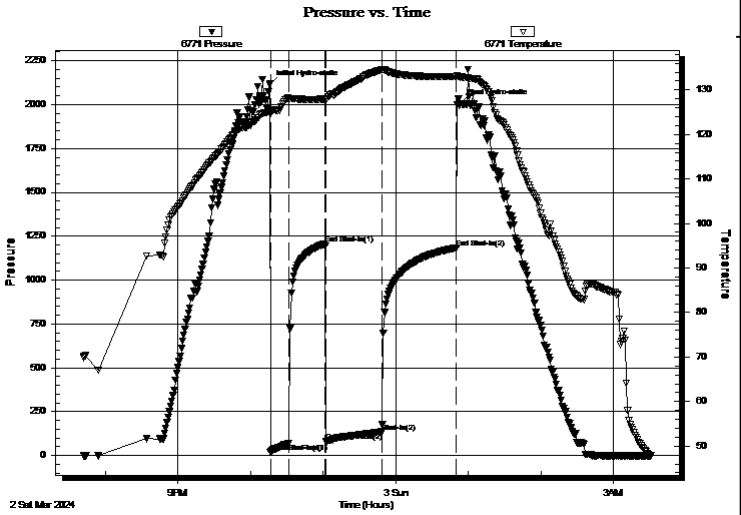
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6771 **Inside**

Press@RunDepth: 134.94 psig @ 4209.00 ft (KB)
Start Date: 2024.03.02 End Date: 2024.03.03
Start Time: 19:42:01 End Time: 03:30:51

Capacity: 8000.00 psig
Last Calib.: 2024.03.03
Time On Btm: 2024.03.02 @ 22:16:06
Time Off Btm: 2024.03.03 @ 00:53:36

TEST COMMENT: 15 - IF: Blow built to 4 1/4"
30 - ISI: No blow
45 - FF: Blow built to 8 3/4"
60 - FSI: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2114.09	125.15	Initial Hydro-static
1	19.54	124.71	Open To Flow (1)
16	69.88	128.02	Shut-In(1)
46	1207.75	127.95	End Shut-In(1)
46	79.86	127.69	Open To Flow (2)
93	134.94	134.53	Shut-In(2)
155	1184.02	132.96	End Shut-In(2)
158	2004.93	132.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
176.00	MCW w/trace oil 78%w , 22%m	0.87
83.00	WCM w/trace oil 69%m, 31%w	1.16

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70946 **DST#: 1**

Test Start: 2024.03.02 @ 19:42:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "A"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:16:21
Time Test Ended: 03:30:51

Test Type: Conventional Bottom Hole (Initial)
Tester: James Winder
Unit No: 73

Interval: 4208.00 ft (KB) To 4274.00 ft (KB) (TVD)
Total Depth: 4274.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

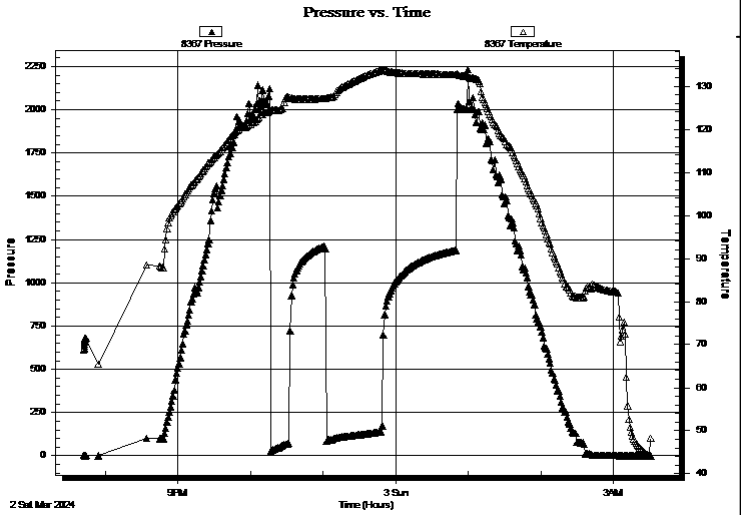
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8367 **Outside**

Press@RunDepth: psig @ 4209.00 ft (KB)
Start Date: 2024.03.02 End Date: 2024.03.03
Start Time: 19:42:01 End Time: 03:30:51

Capacity: 8000.00 psig
Last Calib.: 2024.03.03
Time On Btm:
Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to 4 1/4"
30 - ISI: No blow
45 - FF: Blow built to 8 3/4"
60 - FSI: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
176.00	MCW w/trace oil 78%w , 22%m	0.87
83.00	WCM w/trace oil 69%m, 31%w	1.16

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Dow ning

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70946 **DST#: 1**

Test Start: 2024.03.02 @ 19:42:00

Tool Information

Drill Pipe:	Length:	4010.00 ft	Diameter:	3.80 inches	Volume:	56.25 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	176.00 ft	Diameter:	2.25 inches	Volume:	0.87 bbl	Weight to Pull Loose:		60000.00 lb
					Total Volume:	57.12 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		11.00 ft					String Weight:	Initial	56000.00 lb
Depth to Top Packer:		4208.00 ft						Final	58000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		66.00 ft							
Tool Length:		99.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4176.00		
Shut In Tool	5.00			4181.00		
Hydraulic tool	5.00			4186.00		
Jars	5.00			4191.00		
EM Tool	4.00			4195.00		
Safety Joint	3.00			4198.00		
Packer	5.00			4203.00	33.00	Bottom Of Top Packer
Packer	5.00			4208.00		
Stubb	1.00			4209.00		
Recorder	0.00	6771	Inside	4209.00		
Recorder	0.00	8367	Outside	4209.00		
Perforations	26.00			4235.00		
Blank Spacing	34.00			4269.00		
Perforations	2.00			4271.00		
Bullnose	3.00			4274.00	66.00	Bottom Packers & Anchor
Total Tool Length:	**99.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70946 **DST#: 1**

Test Start: 2024.03.02 @ 19:42:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	23000 ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.77 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	700.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
176.00	MCW w/trace oil 78%w, 22%m	0.866
83.00	WCM w/trace oil 69%m, 31%w	1.164

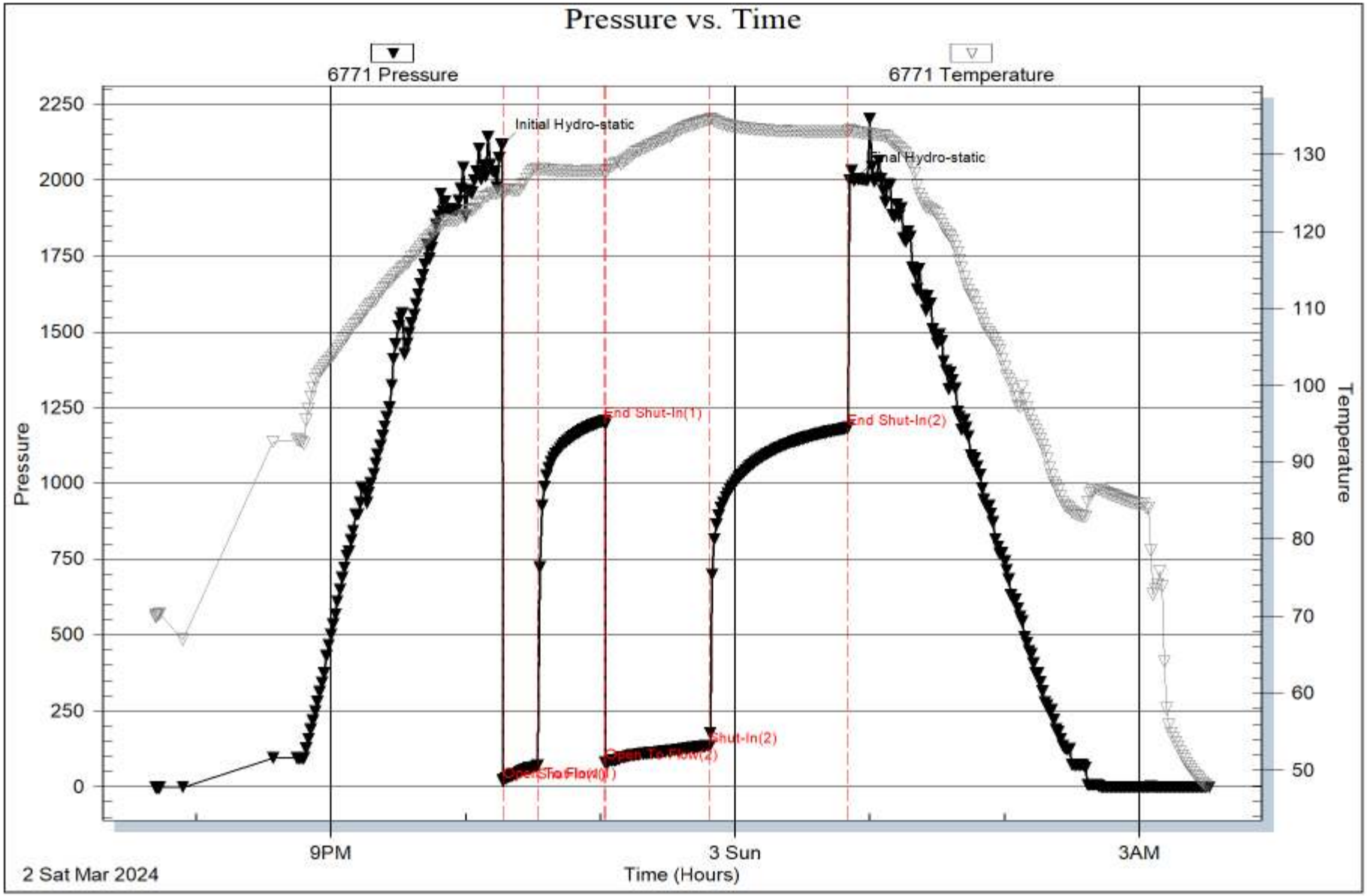
Total Length: 259.00 ft Total Volume: 2.030 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

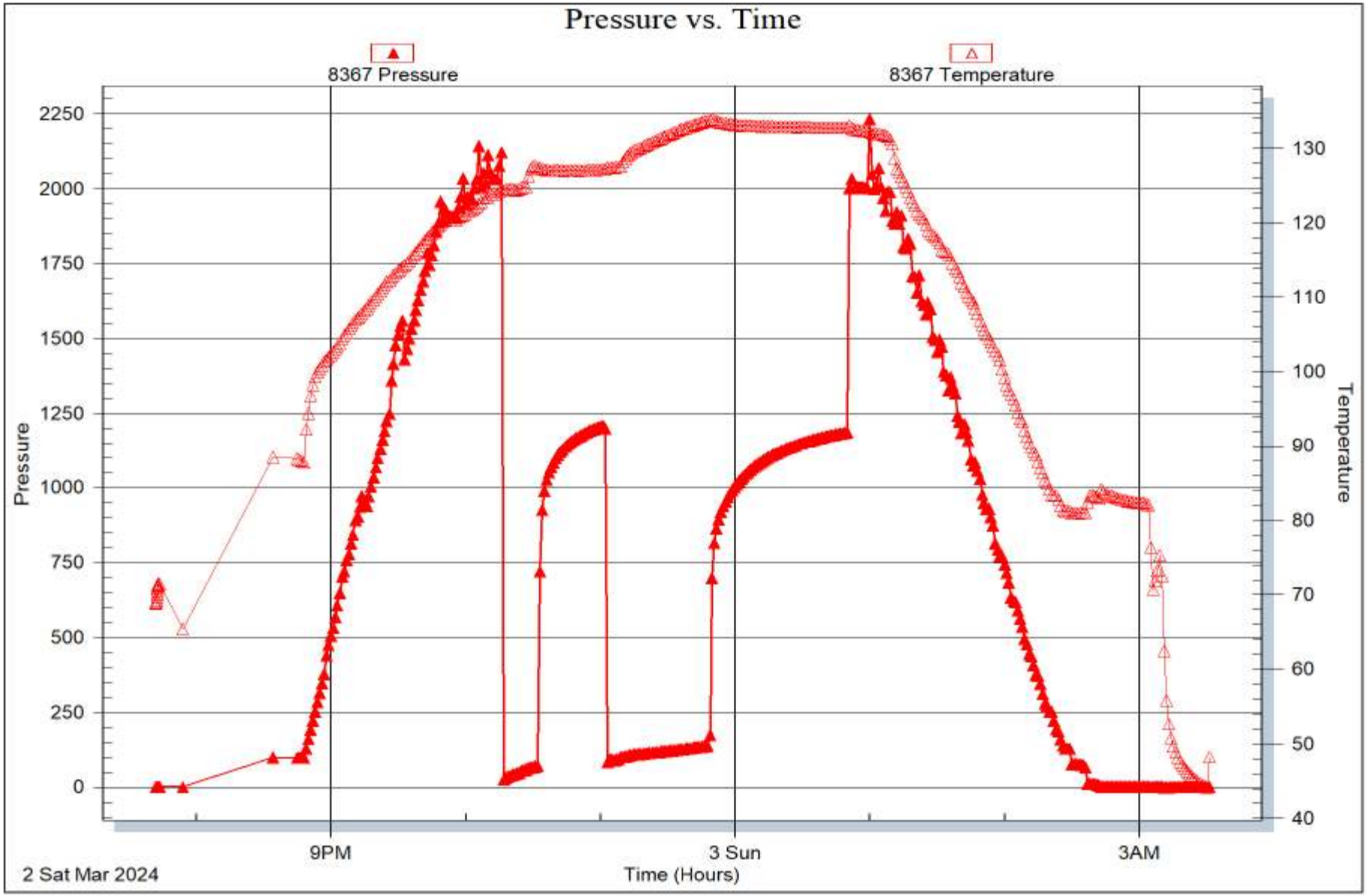
Recovery Comments: RW = .410 ohms @ 50 deg F Chlorides = 23,000 ppm

Serial #: 6771 **Inside** Downing Nelson Oil Co., Inc. HFI #1-27 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 70946 Printed: 2024.03.07 @ 12:42:20

Serial #: 8367 **Outside** Dow ning Nelson Oil Co., Inc. HFI #1-27 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 70946 Printed: 2024.03.07 @ 12:42:20

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

HFI #1-27

27-4s-36w Rawlins, KS

Start Date: 2024.03.04 @ 00:04:00
End Date: 2024.03.04 @ 07:40:36
Job Ticket #: 70947 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.03.07 @ 12:41:50

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70947 **DST#: 2**

Test Start: 2024.03.04 @ 00:04:00

GENERAL INFORMATION:

Formation: **LKC "J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:26:36
Time Test Ended: 07:40:36

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 73

Interval: 4408.00 ft (KB) To 4458.00 ft (KB) (TVD)
Total Depth: 4458.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

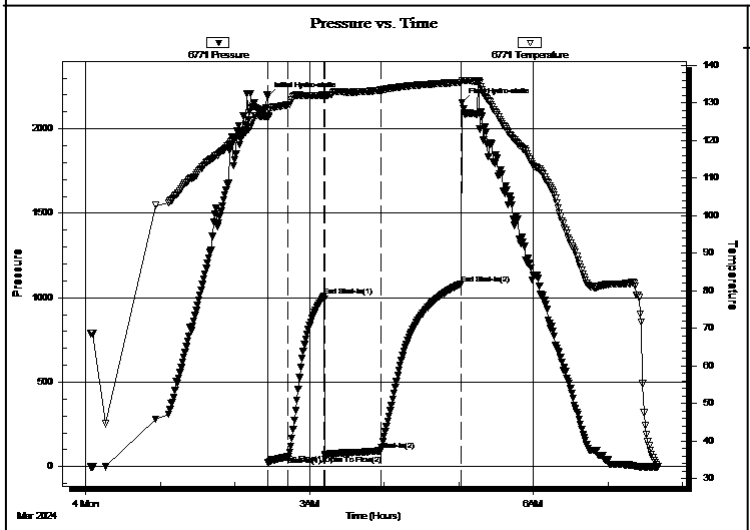
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6771 **Inside**

Press@RunDepth: 93.74 psig @ 4409.00 ft (KB)
Start Date: 2024.03.04 End Date: 2024.03.04
Start Time: 00:04:01 End Time: 07:40:36

Capacity: 8000.00 psig
Last Calib.: 2024.03.04
Time On Btm: 2024.03.04 @ 02:26:21
Time Off Btm: 2024.03.04 @ 05:02:51

TEST COMMENT: 15 - IF: Blow built to 7 1/2"
30 - ISI: No blow
45 - FF: Blow built to BOB (11") at 22 min., built to 20"
60 - FSI: Blow back built to 1/4"+ then died back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2191.19	126.48	Initial Hydro-static
1	22.53	126.07	Open To Flow (1)
17	58.87	129.53	Shut-In(1)
46	1009.82	132.10	End Shut-In(1)
46	66.25	131.99	Open To Flow (2)
91	93.74	133.44	Shut-In(2)
156	1083.88	135.53	End Shut-In(2)
157	2156.59	136.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	GMO 46%o, 39%m, 15%g	0.58
58.00	MCO 62%o, 38%m	0.29
31.00	Clean Oil 98%o, 2%g	0.43
0.00	GIP = 280'	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70947 **DST#: 2**

Test Start: 2024.03.04 @ 00:04:00

GENERAL INFORMATION:

Formation: **LKC "J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:26:36
Time Test Ended: 07:40:36

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 73

Interval: 4408.00 ft (KB) To 4458.00 ft (KB) (TVD)
Total Depth: 4458.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

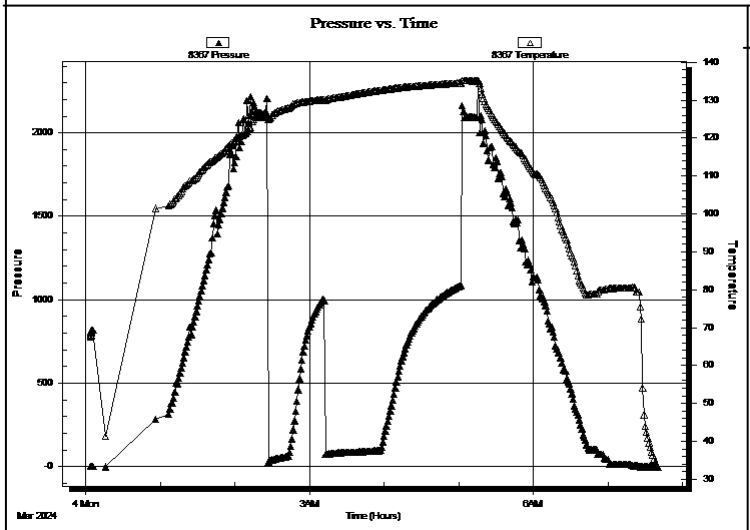
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8367 **Outside**

Press@RunDepth: psig @ 4409.00 ft (KB)
Start Date: 2024.03.04 End Date: 2024.03.04
Start Time: 00:04:01 End Time: 07:40:36

Capacity: 8000.00 psig
Last Calib.: 2024.03.04
Time On Btm:
Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to 7 1/2"
30 - ISI: No blow
45 - FF: Blow built to BOB (11") at 22 min., built to 20"
60 - FSI: Blow back built to 1/4"+ then died back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
118.00	GMO 46%o, 39%m, 15%g	0.58
58.00	MCO 62%o, 38%m	0.29
31.00	Clean Oil 98%o, 2%g	0.43
0.00	GIP = 280'	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Dow ning

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70947 **DST#: 2**

Test Start: 2024.03.04 @ 00:04:00

Tool Information

Drill Pipe:	Length:	4229.00 ft	Diameter:	3.80 inches	Volume:	59.32 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:		20000.00 lb
Drill Collar:	Length:	176.00 ft	Diameter:	2.25 inches	Volume:	0.87 bbl	Weight to Pull Loose:		60000.00 lb
					Total Volume:	60.19 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		30.00 ft					String Weight:	Initial	60000.00 lb
Depth to Top Packer:		4408.00 ft						Final	64000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		50.00 ft							
Tool Length:		83.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4376.00		
Shut In Tool	5.00			4381.00		
Hydraulic tool	5.00			4386.00		
Jars	5.00			4391.00		
EM Tool	4.00			4395.00		
Safety Joint	3.00			4398.00		
Packer	5.00			4403.00	33.00	Bottom Of Top Packer
Packer	5.00			4408.00		
Stubb	1.00			4409.00		
Recorder	0.00	6771	Inside	4409.00		
Recorder	0.00	8367	Outside	4409.00		
Perforations	11.00			4420.00		
Blank Spacing	33.00			4453.00		
Perforations	2.00			4455.00		
Bullnose	3.00			4458.00	50.00	Bottom Packers & Anchor
Total Tool Length:	**83.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70947 **DST#: 2**

Test Start: 2024.03.04 @ 00:04:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	34.6 deg API
Mud Weight:	10.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	70.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.37 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	900.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
118.00	GMO 46%o, 39%m, 15%g	0.580
58.00	MCO 62%o, 38%m	0.285
31.00	Clean Oil 98%o, 2%g	0.435
0.00	GIP = 280'	0.000

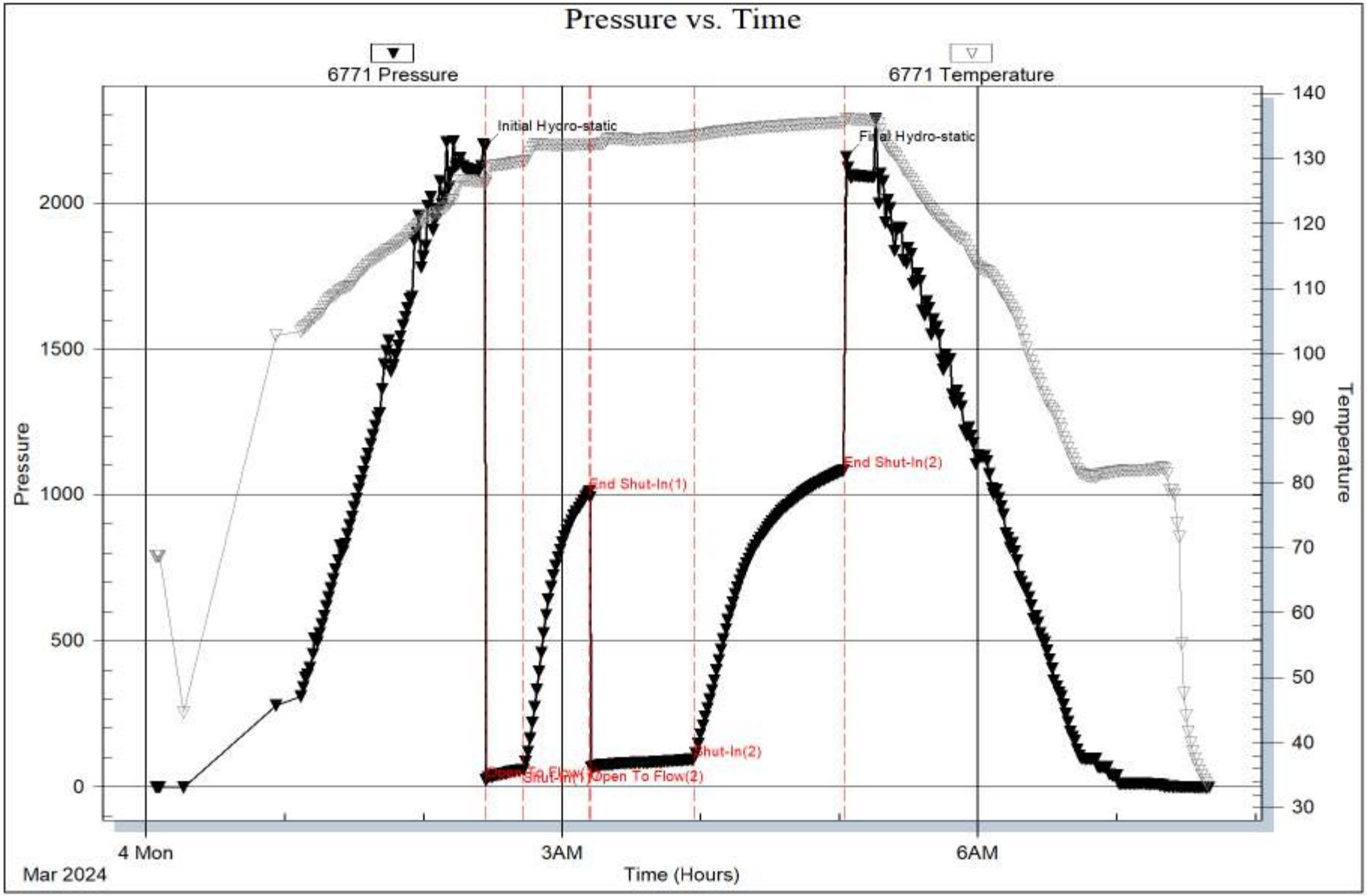
Total Length: 207.00 ft Total Volume: 1.300 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

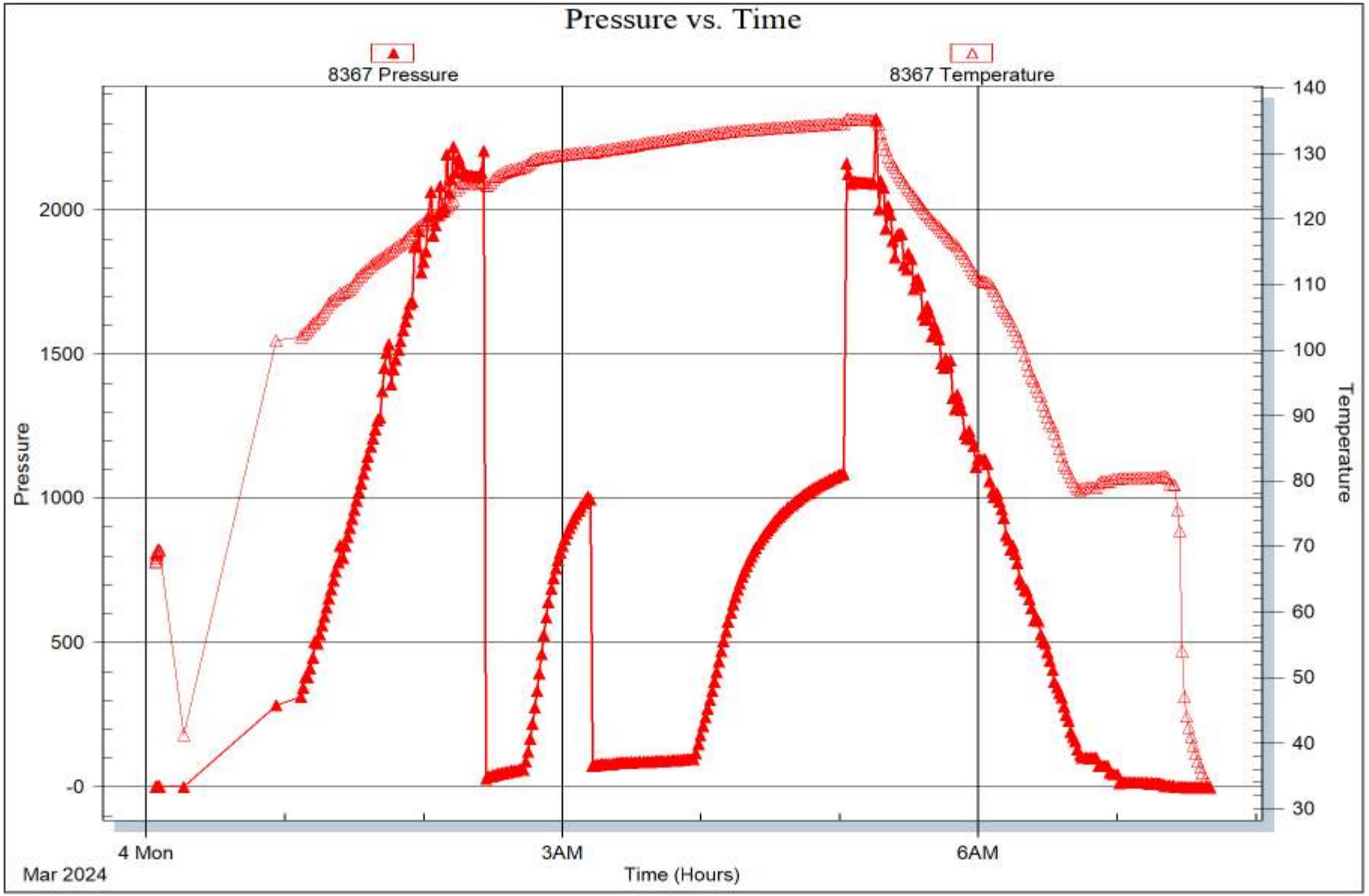
Recovery Comments: Gravity = 33.8 api @ 52 deg F Corrected Gravity = 34.6 api

Serial #: 6771 **Inside** Downing Nelson Oil Co., Inc. HFI #1-27 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 70947 Printed: 2024.03.07 @ 12:41:51

Serial #: 8367 **Outside** Downing Nelson Oil Co., Inc. HFI #1-27 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 70947 Printed: 2024.03.07 @ 12:41:51

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

HFI #1-27

27-4s-36w Rawlins, KS

Start Date: 2024.03.04 @ 19:18:00
End Date: 2024.03.05 @ 03:00:36
Job Ticket #: 70948 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.03.07 @ 12:41:23

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70948 **DST#: 3**

Test Start: 2024.03.04 @ 19:18:00

GENERAL INFORMATION:

Formation: **LKC "L" - Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:35:51
Time Test Ended: 03:00:36

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 73

Interval: 4484.00 ft (KB) To 4534.00 ft (KB) (TVD)
Total Depth: 4534.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

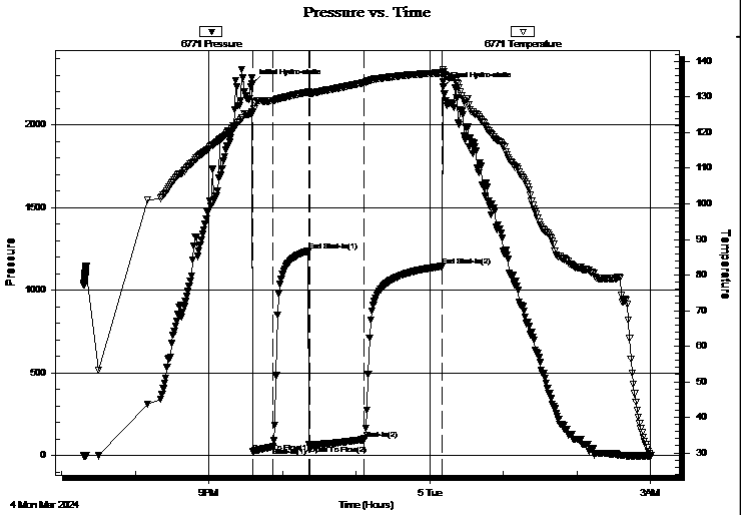
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6771 **Inside**

Press@RunDepth: 96.67 psig @ 4485.00 ft (KB)
Start Date: 2024.03.04 End Date: 2024.03.05
Start Time: 19:18:01 End Time: 03:00:36

Capacity: 8000.00 psig
Last Calib.: 2024.03.05
Time On Btm: 2024.03.04 @ 21:35:21
Time Off Btm: 2024.03.05 @ 00:11:06

TEST COMMENT: 15 - IF: Blow built to 9 1/2"
30 - ISI: Blow back built to 1/8"
45 - FF: Blow built to BOB (11") at 23 min., built to 17 1/2"
60 - FSI: Blow back built to 1/4"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2245.81	125.95	Initial Hydro-static
1	22.15	125.61	Open To Flow (1)
17	52.27	128.94	Shut-In(1)
46	1237.73	131.38	End Shut-In(1)
47	59.08	131.01	Open To Flow (2)
92	96.67	134.08	Shut-In(2)
155	1144.21	136.79	End Shut-In(2)
156	2230.86	137.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
59.00	OCM 90%m, 10%o	0.29
59.00	MCGO 75%o, 15%g, 10%m	0.29
120.00	CGO 53%g, 47%o	1.15
127.00	CGO 85%o, 15%g	1.78
0.00	GIP = 250'	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70948 **DST#: 3**

Test Start: 2024.03.04 @ 19:18:00

GENERAL INFORMATION:

Formation: **LKC "L" - Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:35:51
Time Test Ended: 03:00:36

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 73

Interval: 4484.00 ft (KB) To 4534.00 ft (KB) (TVD)
Total Depth: 4534.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

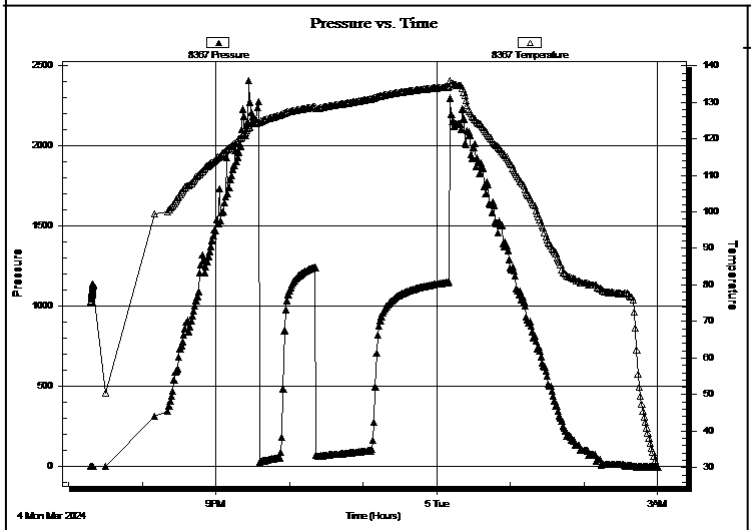
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8367 **Outside**

Press@RunDepth: psig @ 4485.00 ft (KB)
Start Date: 2024.03.04 End Date: 2024.03.05
Start Time: 19:18:01 End Time: 03:00:36

Capacity: 8000.00 psig
Last Calib.: 2024.03.05
Time On Btm:
Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to 9 1/2"
30 - ISI: Blow back built to 1/8"
45 - FF: Blow built to BOB (11") at 23 min., built to 17 1/2"
60 - FSI: Blow back built to 1/4"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
59.00	OCM 90%m, 10%o	0.29
59.00	MCGO 75%o, 15%g, 10%m	0.29
120.00	CGO 53%g, 47%o	1.15
127.00	CGO 85%o, 15%g	1.78
0.00	GIP = 250'	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70948 **DST#: 3**

Test Start: 2024.03.04 @ 19:18:00

Tool Information

Drill Pipe:	Length:	4291.00 ft	Diameter:	3.80 inches	Volume:	60.19 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:		20000.00 lb
Drill Collar:	Length:	176.00 ft	Diameter:	2.25 inches	Volume:	0.87 bbl	Weight to Pull Loose:		65000.00 lb
					Total Volume:	61.06 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		16.00 ft					String Weight:	Initial	60000.00 lb
Depth to Top Packer:		4484.00 ft						Final	65000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		20.00 ft							
Tool Length:		53.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4452.00		
Shut In Tool	5.00			4457.00		
Hydraulic tool	5.00			4462.00		
Jars	5.00			4467.00		
EM Tool	4.00			4471.00		
Safety Joint	3.00			4474.00		
Packer	5.00			4479.00	33.00	Bottom Of Top Packer
Packer	5.00			4484.00		
Stubb	1.00			4485.00		
Recorder	0.00	6771	Inside	4485.00		
Recorder	0.00	8367	Outside	4485.00		
Perforations	11.00			4496.00		
Blank Spacing	3.00			4499.00		
Perforations	2.00			4501.00		
Bullnose	3.00			4504.00	20.00	Bottom Packers & Anchor
Total Tool Length:	**53.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70948 **DST#: 3**

Test Start: 2024.03.04 @ 19:18:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	25.2 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	76.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	800.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
59.00	OCM 90%m, 10%o	0.290
59.00	MCGO 75%o, 15%g, 10%m	0.290
120.00	CGO 53%g, 47%o	1.155
127.00	CGO 85%o, 15%g	1.781
0.00	GIP = 250'	0.000

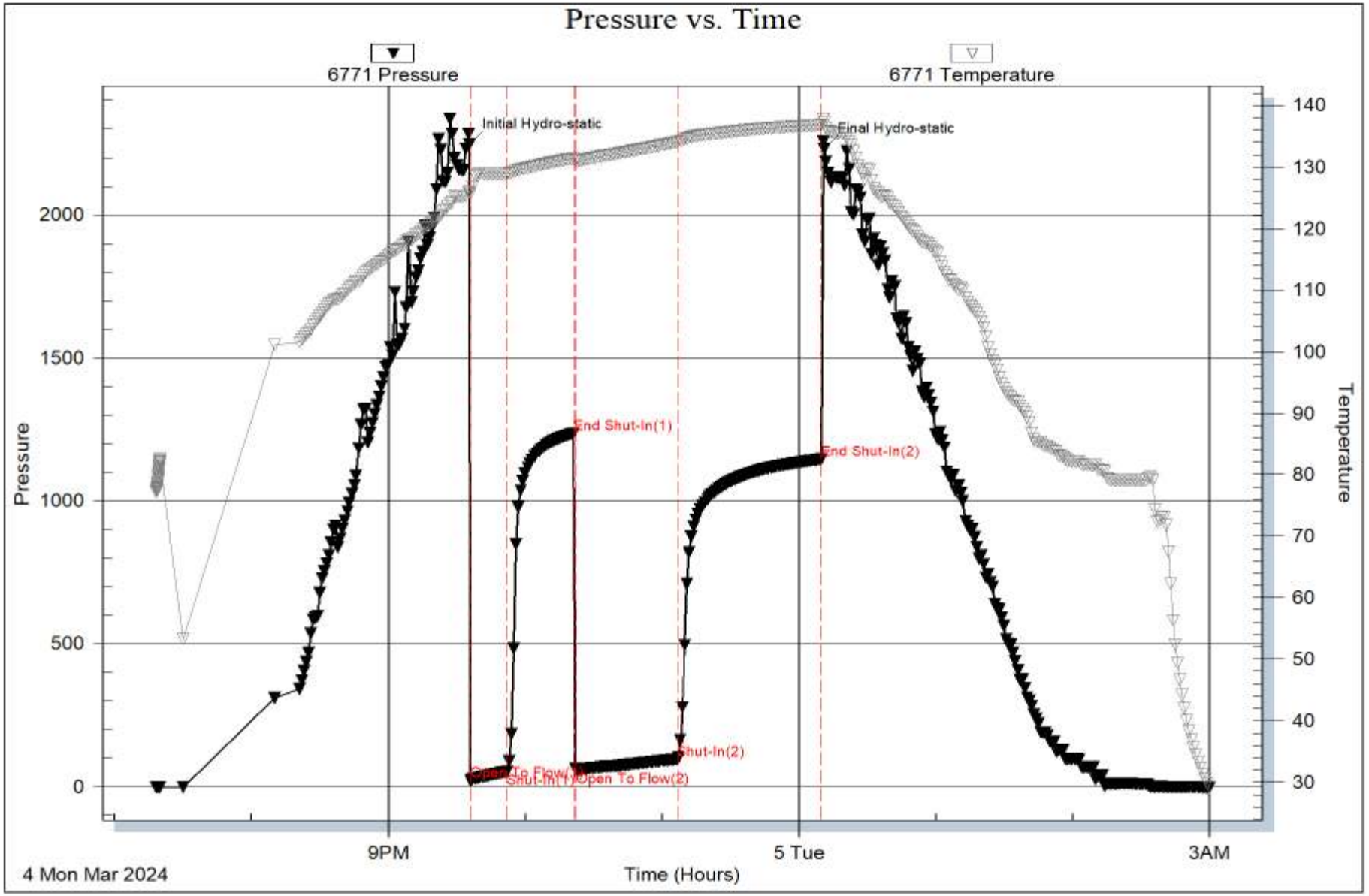
Total Length: 365.00 ft Total Volume: 3.516 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

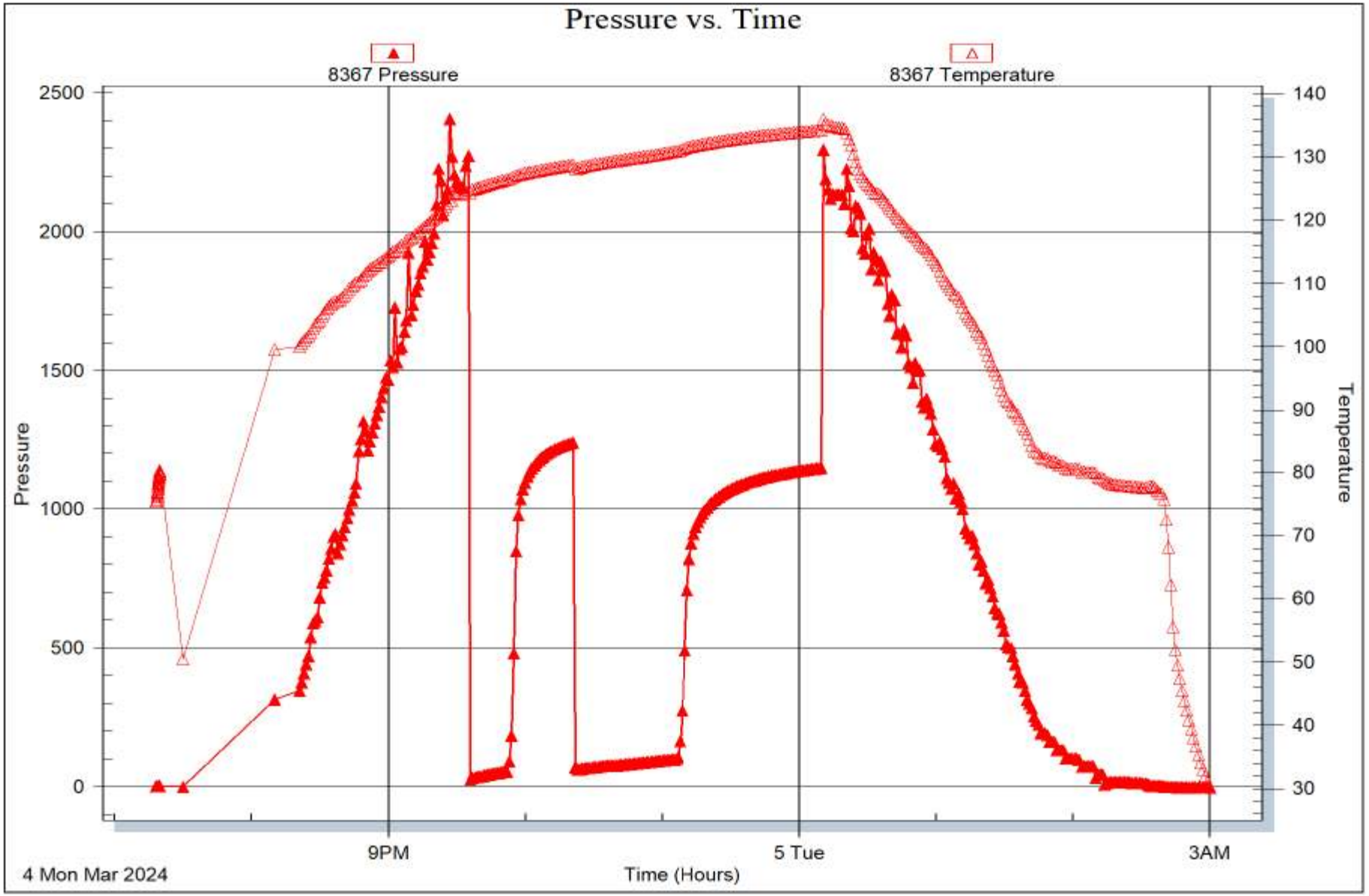
Recovery Comments: Gravity = 22.2 api @ 30 deg F Corrected Gravity = 25.2 api

Serial #: 6771 **Inside** Downing Nelson Oil Co., Inc. HFI #1-27 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 70948 Printed: 2024.03.07 @ 12:41:24

Serial #: 8367 **Outside** Downing Nelson Oil Co., Inc. HFI #1-27 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 70948 Printed: 2024.03.07 @ 12:41:24

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

HFI #1-27

27-4s-36w Rawlins, KS

Start Date: 2024.03.05 @ 20:00:00
End Date: 2024.03.06 @ 05:02:50
Job Ticket #: 70949 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.03.07 @ 12:40:55

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70949 **DST#: 4**

Test Start: 2024.03.05 @ 20:00:00

GENERAL INFORMATION:

Formation: **Pawnee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:30:51
Time Test Ended: 05:02:50

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 73

Interval: 4606.00 ft (KB) To 4644.00 ft (KB) (TVD)
Total Depth: 4644.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

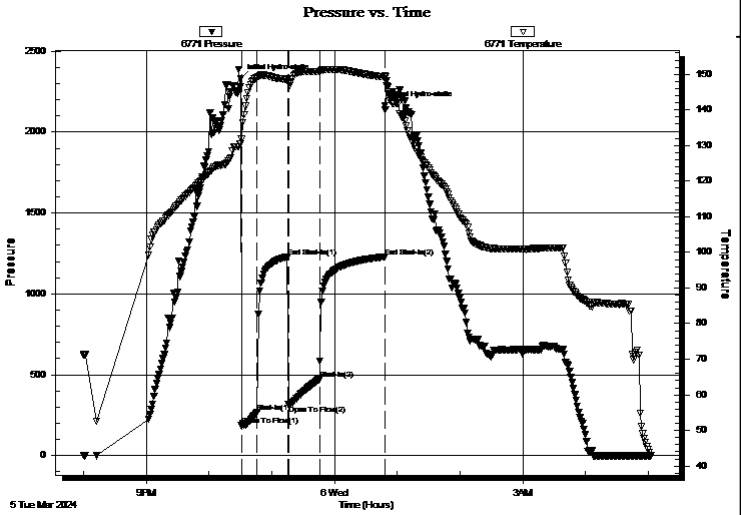
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6771 **Inside**

Press@RunDepth: 473.50 psig @ 4607.00 ft (KB)
Start Date: 2024.03.05 End Date: 2024.03.06
Start Time: 20:00:01 End Time: 05:02:50

Capacity: 8000.00 psig
Last Calib.: 2024.03.06
Time On Btm: 2024.03.05 @ 22:30:21
Time Off Btm: 2024.03.06 @ 00:48:06

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 1 1/2 min., built to 72 1/2"
30 - ISI: Blow back built to BOB in 10 min., built to 21"
30 - FF: Blow built to BOB at 2 1/2 min., built to 77"
60 - FSI: Blow back built to BOB in 22 min., built to 31"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2330.85	130.58	Initial Hydro-static
1	185.28	131.82	Open To Flow (1)
16	267.42	149.11	Shut-In(1)
45	1230.41	148.41	End Shut-In(1)
46	311.40	147.38	Open To Flow (2)
76	473.50	150.81	Shut-In(2)
138	1228.70	149.23	End Shut-In(2)
138	2164.90	149.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	MO 50%o, 45%m, 5%g	0.58
1190.00	Rev out samples every 5 min	16.16
0.00	5 - 15 min GO 66%o, 32%g, 2%m	0.00
0.00	20 - 30 min GO 80%o, 17%g, 3%m	0.00
5.00	CO 95%o, 5%g	0.07
0.00	GIP = 1625'	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70949 **DST#: 4**

Test Start: 2024.03.05 @ 20:00:00

GENERAL INFORMATION:

Formation: **Pawnee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:30:51
Time Test Ended: 05:02:50

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 73

Interval: 4606.00 ft (KB) To 4644.00 ft (KB) (TVD)
Total Depth: 4644.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

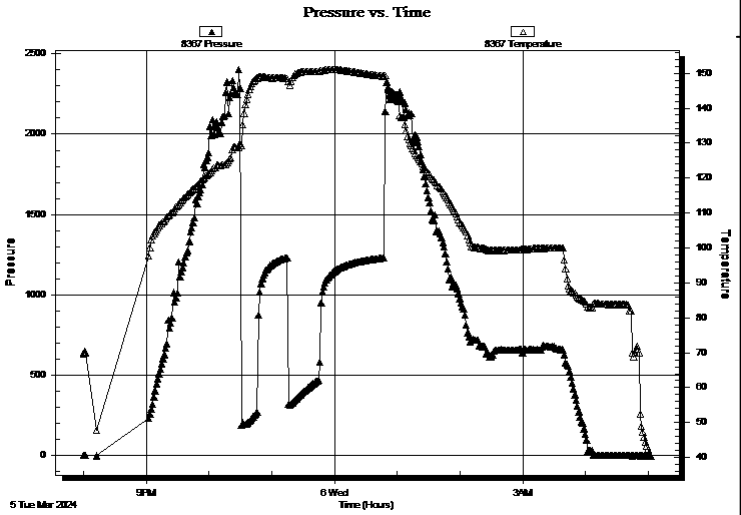
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8367 **Outside**

Press@RunDepth: psig @ 4607.00 ft (KB)
Start Date: 2024.03.05 End Date: 2024.03.06
Start Time: 20:00:01 End Time: 05:02:50

Capacity: 8000.00 psig
Last Calib.: 2024.03.06
Time On Btm:
Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 1 1/2 min., built to 72 1/2"
30 - ISI: Blow back built to BOB in 10 min., built to 21"
30 - FF: Blow built to BOB at 2 1/2 min., built to 77"
60 - FSI: Blow back built to BOB in 22 min., built to 31"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
118.00	MO 50%o, 45%m, 5%g	0.58
1190.00	Rev out samples every 5 min	16.16
0.00	5 - 15 min GO 66%o, 32%g, 2%m	0.00
0.00	20 - 30 min GO 80%o, 17%g, 3%m	0.00
5.00	CO 95%o, 5%g	0.07
0.00	GIP = 1625'	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Dow ning

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70949 **DST#: 4**

Test Start: 2024.03.05 @ 20:00:00

Tool Information

Drill Pipe:	Length:	4415.00 ft	Diameter:	3.80 inches	Volume:	61.93 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:		20000.00 lb
Drill Collar:	Length:	176.00 ft	Diameter:	2.25 inches	Volume:	0.87 bbl	Weight to Pull Loose:		60000.00 lb
					Total Volume:	62.80 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		18.00 ft					String Weight:	Initial	64000.00 lb
Depth to Top Packer:		4606.00 ft						Final	64000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		38.00 ft							
Tool Length:		71.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4574.00		
Shut In Tool	5.00			4579.00		
Hydraulic tool	5.00			4584.00		
Jars	5.00			4589.00		
EM Tool	4.00			4593.00		
Safety Joint	3.00			4596.00		
Packer	5.00			4601.00	33.00	Bottom Of Top Packer
Packer	5.00			4606.00		
Stubb	1.00			4607.00		
Recorder	0.00	6771	Inside	4607.00		
Recorder	0.00	8367	Outside	4607.00		
Perforations	34.00			4641.00		
Bullnose	3.00			4644.00	38.00	Bottom Packers & Anchor
Total Tool Length:	**71.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70949 **DST#: 4**

Test Start: 2024.03.05 @ 20:00:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	25.6 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	52.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	900.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
118.00	MO 50%o, 45%m, 5%g	0.580
1190.00	Rev out samples every 5 min	16.164
0.00	5 - 15 min GO 66%o, 32%g, 2%m	0.000
0.00	20 - 30 min GO 80%o, 17%g, 3%m	0.000
5.00	CO 95%o, 5%g	0.070
0.00	GIP = 1625'	0.000

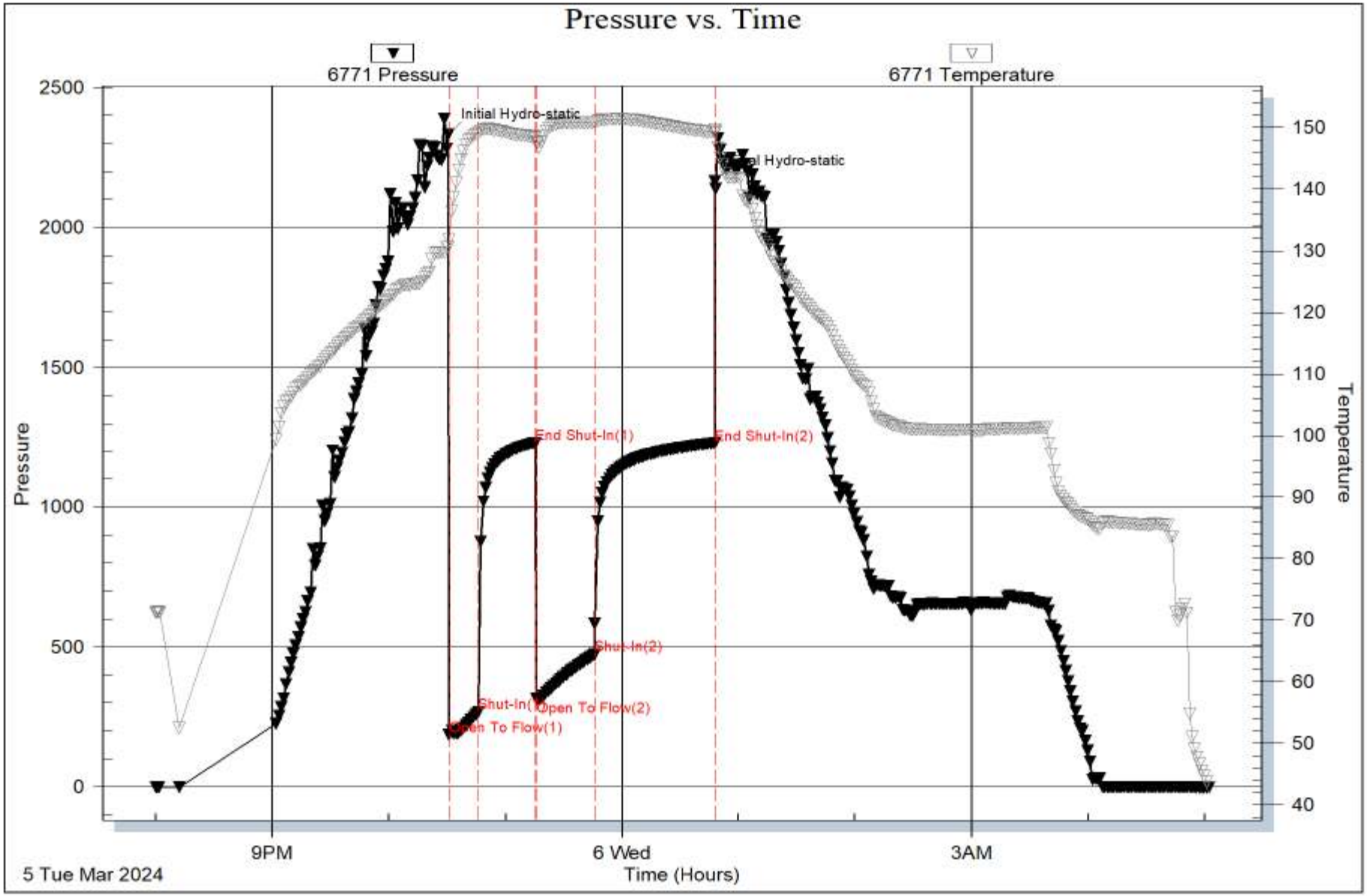
Total Length: 1313.00 ft Total Volume: 16.814 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

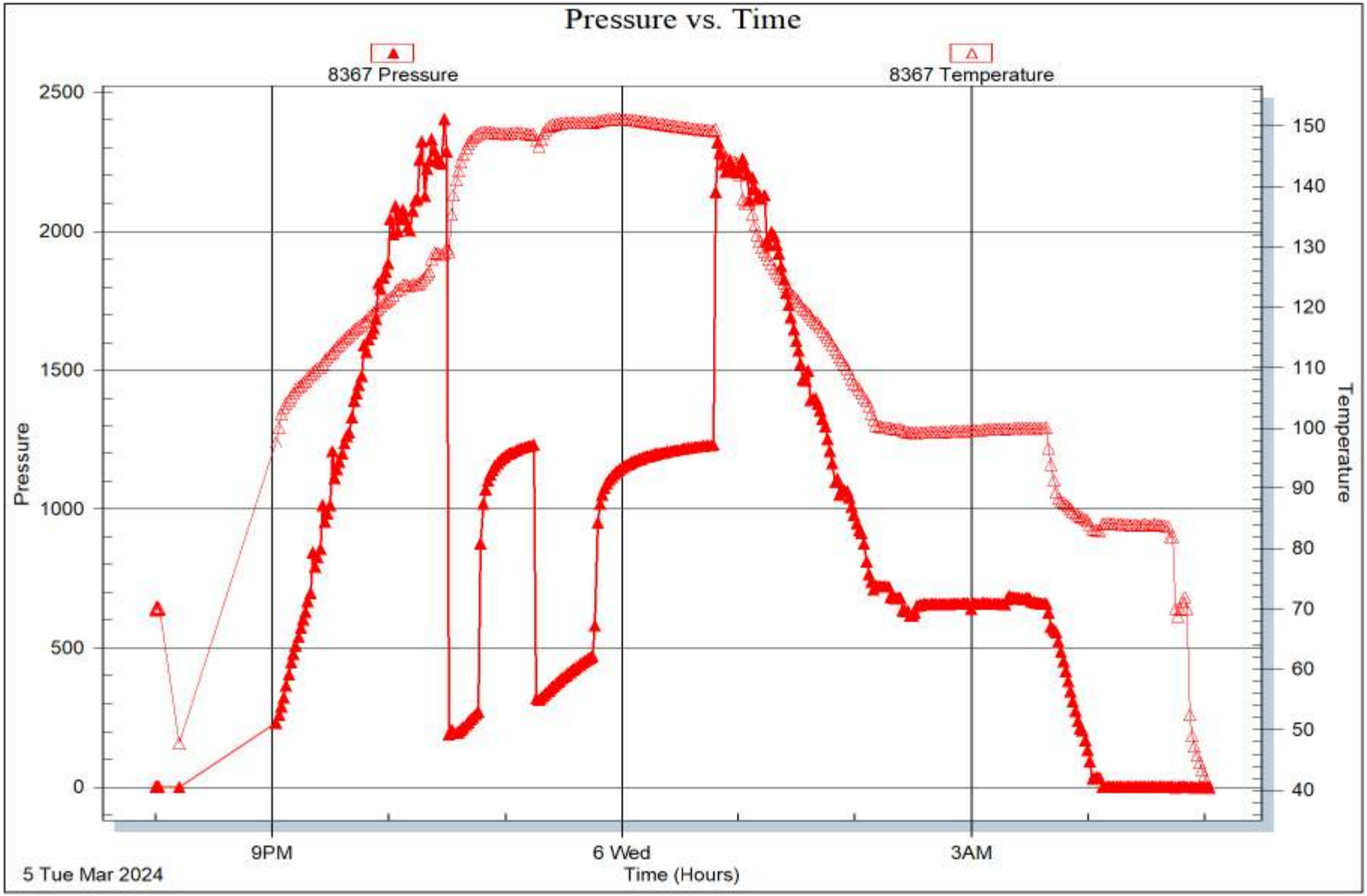
Recovery Comments: Gravity = 24 api @ 44 deg F corrected gravity = 25.6 api

Serial #: 6771 **Inside** Downing Nelson Oil Co., Inc. HFI #1-27 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 70949 Printed: 2024.03.07 @ 12:40:56

Serial #: 8367 **Outside** Downing Nelson Oil Co., Inc. HFI #1-27 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 70949 Printed: 2024.03.07 @ 12:40:56

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

HFI #1-27

27-4s-36w Rawlins, KS

Start Date: 2024.03.06 @ 19:57:00
End Date: 2024.03.07 @ 05:31:35
Job Ticket #: 70950 DST #: 5

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.03.07 @ 12:40:16

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70950 **DST#: 5**

Test Start: 2024.03.06 @ 19:57:00

GENERAL INFORMATION:

Formation: **Cherokee Lime**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:26:06
Time Test Ended: 05:31:35

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 73

Interval: 4701.00 ft (KB) To 4745.00 ft (KB) (TVD)
Total Depth: 4745.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

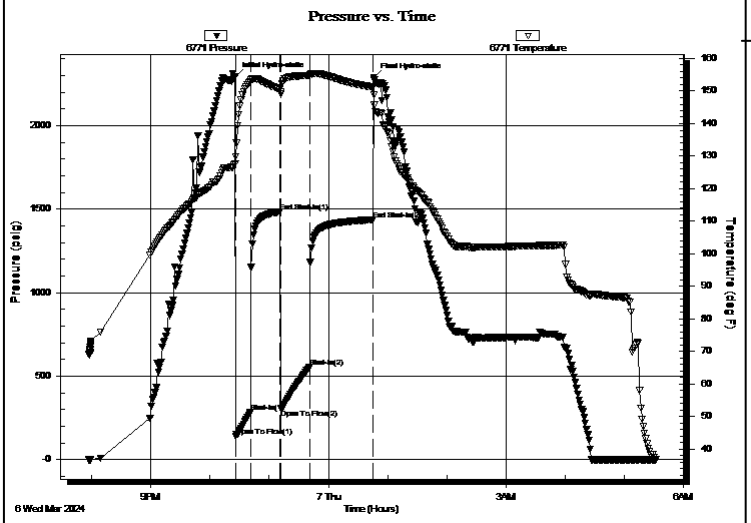
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6771 **Inside**

Press@RunDepth: 554.84 psig @ 4702.00 ft (KB)
Start Date: 2024.03.06 End Date: 2024.03.07
Start Time: 19:57:01 End Time: 05:31:35

Capacity: 8000.00 psig
Last Calib.: 2024.03.07
Time On Btm: 2024.03.06 @ 22:25:36
Time Off Btm: 2024.03.07 @ 00:46:06

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 1 3/4 min., built to 69 3/4"
30 - ISI: Blow back built to 6"
30 - FF: Blow built to BOB at 3 1/4 min., built to 88 1/4 "
60 - FSI: Blow back built to BOB at 34 min., built to 18 1/4"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2293.26	127.76	Initial Hydro-static
1	137.42	129.82	Open To Flow (1)
16	284.39	152.92	Shut-In(1)
46	1484.08	150.53	End Shut-In(1)
47	304.36	149.73	Open To Flow (2)
76	554.84	154.73	Shut-In(2)
140	1437.04	151.22	End Shut-In(2)
141	2286.33	148.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	GOCM 69%m, 19%o, 12%g	0.58
1377.00	Rev out samples every 5 min.	18.79
0.00	5 - 20 min. CGO 63%o, 37%g	0.00
0.00	25 - 35 min. CGO 79%o, 21%g	0.00
65.00	CGO 83%o, 17%g	0.91
0.00	GIP = 940'	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70950 **DST#: 5**

Test Start: 2024.03.06 @ 19:57:00

GENERAL INFORMATION:

Formation: **Cherokee Lime**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:26:06
Time Test Ended: 05:31:35

Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 73

Interval: 4701.00 ft (KB) To 4745.00 ft (KB) (TVD)
Total Depth: 4745.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

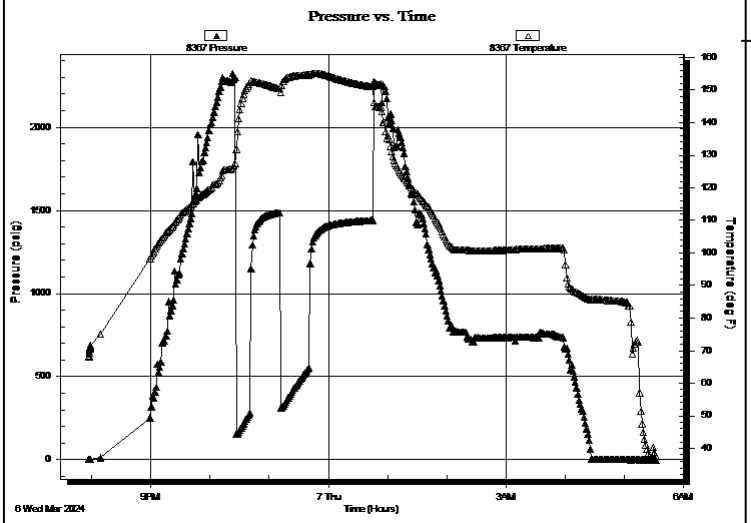
Reference Elevations: 3369.00 ft (KB)
3361.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8367 **Outside**

Press@RunDepth: psig @ 4702.00 ft (KB)
Start Date: 2024.03.06 End Date: 2024.03.07
Start Time: 19:57:01 End Time: 05:31:35

Capacity: 8000.00 psig
Last Calib.: 2024.03.07
Time On Btm:
Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to BOB (11") at 1 3/4 min., built to 69 3/4"
30 - ISI: Blow back built to 6"
30 - FF: Blow built to BOB at 3 1/4 min., built to 88 1/4 "
60 - FSI: Blow back built to BOB at 34 min., built to 18 1/4"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
118.00	GOCM 69%m, 19%o, 12%g	0.58
1377.00	Rev out samples every 5 min.	18.79
0.00	5 - 20 min. CGO 63%o, 37%g	0.00
0.00	25 - 35 min. CGO 79%o, 21%g	0.00
65.00	CGO 83%o, 17%g	0.91
0.00	GIP = 940'	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70950 **DST#: 5**

Test Start: 2024.03.06 @ 19:57:00

Tool Information

Drill Pipe:	Length:	4509.00 ft	Diameter:	3.80 inches	Volume:	63.25 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:		20000.00 lb
Drill Collar:	Length:	176.00 ft	Diameter:	2.25 inches	Volume:	0.87 bbl	Weight to Pull Loose:		70000.00 lb
					Total Volume:	64.12 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		17.00 ft					String Weight:	Initial	66000.00 lb
Depth to Top Packer:		4701.00 ft						Final	70000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		44.00 ft							
Tool Length:		77.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4669.00		
Shut In Tool	5.00			4674.00		
Hydraulic tool	5.00			4679.00		
Jars	5.00			4684.00		
EM Tool	4.00			4688.00		
Safety Joint	3.00			4691.00		
Packer	5.00			4696.00	33.00	Bottom Of Top Packer
Packer	5.00			4701.00		
Stubb	1.00			4702.00		
Recorder	0.00	6771	Inside	4702.00		
Recorder	0.00	8367	Outside	4702.00		
Perforations	5.00			4707.00		
Blank Spacing	34.00			4741.00		
Perforations	1.00			4742.00		
Bullnose	3.00			4745.00	44.00	Bottom Packers & Anchor
Total Tool Length:	**77.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co., Inc.

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

27-4s-36w Rawlins, KS

HFI #1-27

Job Ticket: 70950 **DST#: 5**

Test Start: 2024.03.06 @ 19:57:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	26 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	71.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

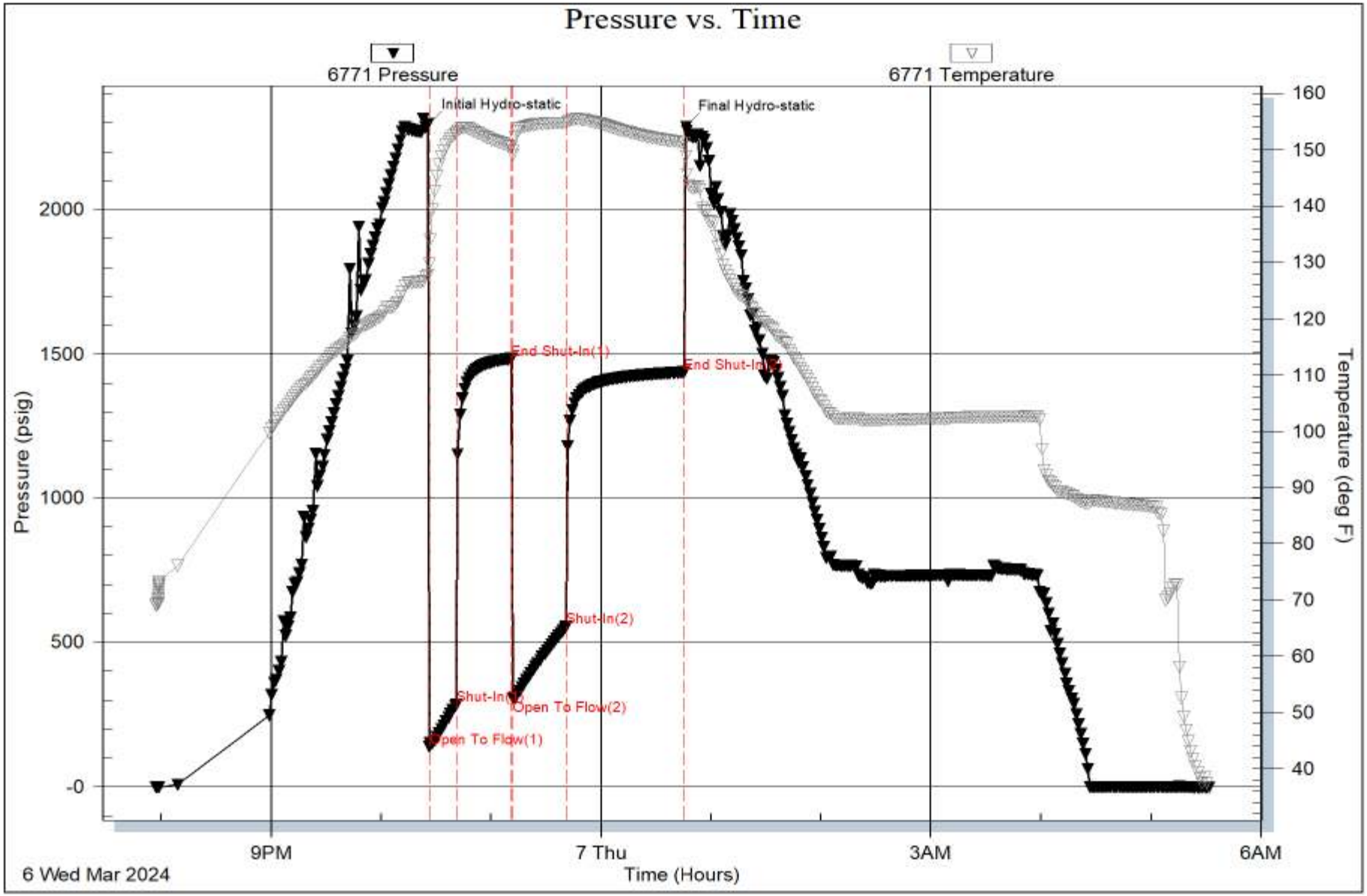
Length ft	Description	Volume bbl
118.00	GOCM 69%m, 19%o, 12%g	0.580
1377.00	Rev out samples every 5 min.	18.787
0.00	5 - 20 min. CGO 63%o, 37%g	0.000
0.00	25 - 35 min. CGO 79%o, 21%g	0.000
65.00	CGO 83%o, 17%g	0.912
0.00	GIP = 940'	0.000

Total Length: 1560.00 ft Total Volume: 20.279 bbl

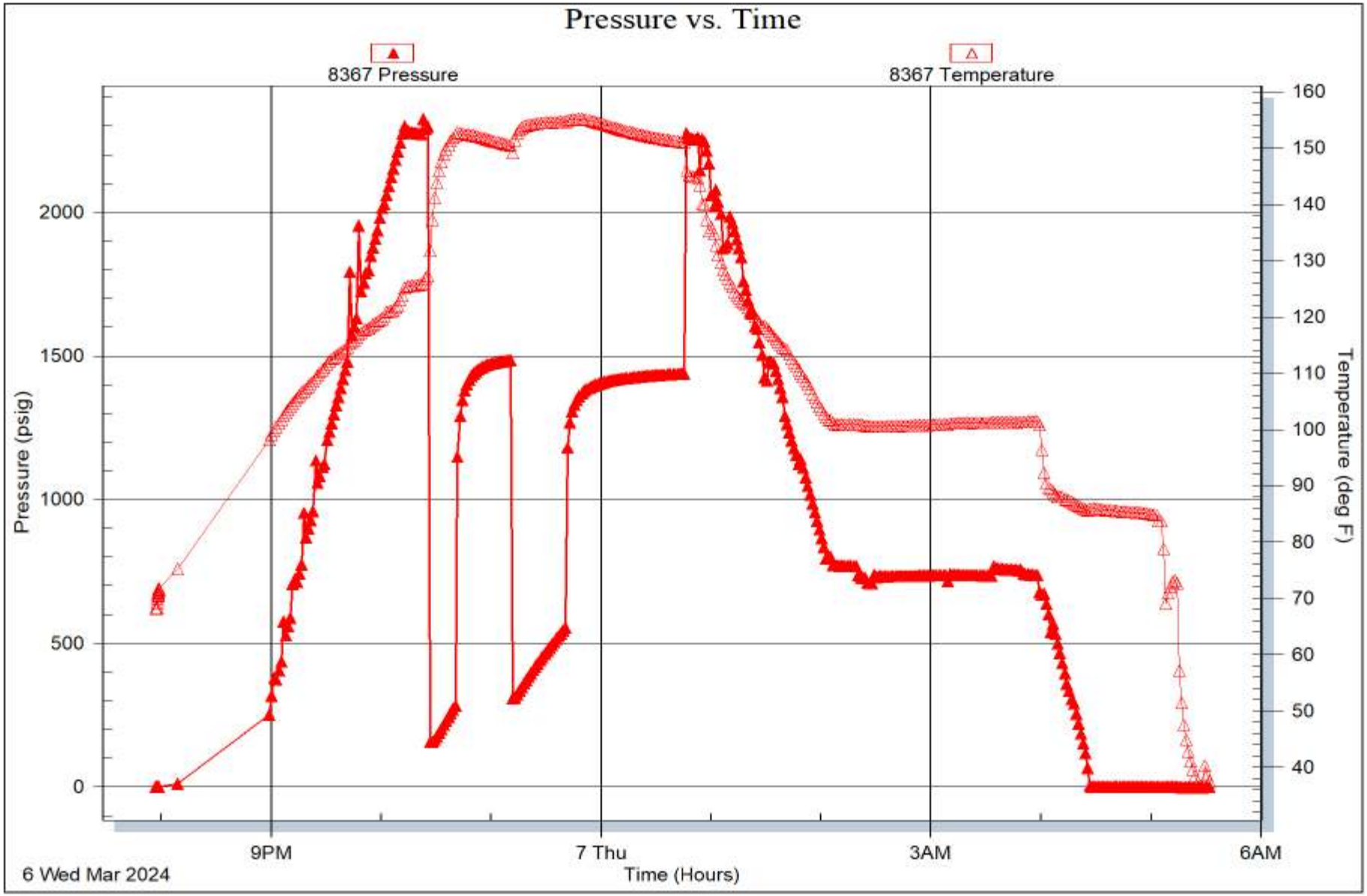
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity = 23.6 api @ 36 deg F Corrected Gravity = 26 api


Pressure vs. Time
6771 Pressure
6771 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Shut-In(1)
Open To Flow(2)
Open To Flow(1)
Pressure (psig)
Temperature (deg F)
2000
1500
1000
500
-0
160
150
140
130
120
110
100
90
80
70
60
50
40
9PM
7 Thu
3AM
6AM
6 Wed Mar 2024
Time (Hours)

Serial #: 8367 **Outside** Dow ning Nelson Oil Co., Inc. HFI #1-27 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 70950 Printed: 2024.03.07 @ 12:40:17

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70946

Well Name & No. HFI #1-27 Test No. 1 Date 3-2-24

Company Downing-Nelson Oil Co. Inc Elevation 3369 KB 3361 GL

Address PO Box 1019 Hays, KS 67601

Co. Rep / Geo Marc Downing Rig Duke #5

Location: Sec. 27 Twp 4S Rge. 36W Co. Rawlins State KS

Interval Tested 4208-4274 Zone Tested Toronto - LKC "A"

Anchor Length 66 Drill Pipe Run 4010 Mud Wt. 9.2

Top Packer Depth 4203 Drill Collars Run 176 Vis 59

Bottom Packer Depth 4208 Wt. Pipe Run - WL 8.8

Total Depth 4274 Chlorides 700 ppm System LCM 4

Blow Description IF: Blow built to 4 1/4"
ISI: No blow
FF: Blow built to 8 3/4"
FSI: No blow

Rec 83	Feet of WCM w/trace oil	%gas trace	%oil 31	%water 69	%mud
Rec 176	Feet of MCW w/trace oil	%gas trace	%oil 78	%water 22	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 259 BHT 133 Gravity ____ API RW .041Ω @ 50 °F Chlorides 23000 ppm

Initial Hydrostatic 2114
Initial Flow 20 to 70
Initial Shut-In 1208
Final Flow 80 to 135
Final Shut-In 1184
Final Hydrostatic 2005

T- On Location 17:20 3/2
Initial Flow 15 T-Started 19:42
Initial Shut-In 30 T-Open 22:16
Final Flow 45 T-Pulled 00:50
Final Shut-In 60 T-Out 3:30 3/3

☑ Test 1950
☑ Jars 300
☐ Circ Sub
☐ Hourly Standby
☑ Mileage 112 RT 196
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby

☐ Ruined Shale Packer
☐ Ruined Packer
☐ Hotel
☑ EM Tool Successful
☐ Accessibility
☐ Gas Sample
☐ Oversized Hole
☐ Sub Total 0
☐ Total 2446
☐ Tool Loaded @
☐ MP/DST Disc't

Comments

Approved By Our Representative James Wilson

Trilobite Testing Inc. shall not be liable for damage of any kind of property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70947

Well Name & No. HFI #1-27 Test No. 2 Date 3-4-24

Company Downing-Nelson Oil Co. Inc Elevation 3369 KB 3361 GL

Address PO Box 1019 Hays KS 67601

Co. Rep / Geo Marc Downing Rig Duke #5

Location: Sec. 27 Twp 4s Rge. 36w Co. Rawlins State KS

Interval Tested 4408 - 4458 Zone Tested LKC "J"

Anchor Length 50 Drill Pipe Run 4229 Mud Wt. 9.5

Top Packer Depth 4403 Drill Collars Run 176 Vis 70

Bottom Packer Depth 4408 Wt. Pipe Run — WL 10.4

Total Depth 4458 Chlorides 900 ppm System LCM 5

Blow Description IF: Blow built to 7½"

ISI: No blow

FF: Blow built to BOB (11") at 22 min, built to 20"

FSI: Blowback built to ¼" + then died back

Rec 31	Feet of Clean Oil		2 %gas	98 %oil		%water		%mud
Rec 58	Feet of MCO		%gas	62 %oil		%water	38	%mud
Rec 118	Feet of GMO		15 %gas	46 %oil		%water	39	%mud
Rec	Feet of GIP = 280'		%gas	%oil		%water		%mud
Rec	Feet of		%gas	%oil		%water		%mud
Rec	Feet of		%gas	%oil		%water		%mud
Rec	Feet of		%gas	%oil		%water		%mud

Rec Total 207 BHT 136 Gravity 34.6 API RW ____ @ ____ °F Chlorides ____ ppm

Initial Hydrostatic 2191

Initial Flow 23 to 59

Initial Shut-In 1010

Final Flow 66 to 94

Final Shut-In 1084

Final Hydrostatic 2157

T- On Location 23:00 3/3

Initial Flow 15 T-Started 00:04

Initial Shut-In 30 T-Open 2:26

Final Flow 45 T-Pulled 5:02

Final Shut-In 60 T-Out 7:40

☑ Test 1950

☑ Jars 300

☐ Circ Sub

☐ Hourly Standby

☑ Mileage 112 RT 196

☐ Sampler

☐ Straddle

☐ Shale Packer

☐ Extra Packer

☐ Extra Recorder

☐ Day Standby

☐ Ruined Shale Packer

☐ Ruined Packer

☐ Hotel

☑ EM Tool Successful

☐ Accessibility

☐ Gas Sample

☐ Oversized Hole

☐ Sub Total 0

☐ Total 2446

☐ Tool Loaded ____ @ ____

☐ MP/DST Disc't

Comments

Approved By ____ Our Representative James Niemann

Trilobite Testing Inc. shall not be liable for damage of any kind of property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70948

Well Name & No. ~~0000~~ HFI #1-27 Test No. 3 Date 3-4-24

Company Downing-Nelson Oil Co. Inc Elevation 3369 KB 3361 GL

Address PO Box 1019 Hays, KS 67601

Co. Rep / Geo Marc Downing Rig Duke #5

Location: Sec. 27 Twp 4s Rge. 36w Co. Rawlins State KS

Interval Tested 4484 - 4534 Zone Tested LKC "L" - Marmaton

Anchor Length 50 Drill Pipe Run 4291 Mud Wt. 9.3

Top Packer Depth 4479 Drill Collars Run 176 Vis 76

Bottom Packer Depth 4484 Wt. Pipe Run - WL 8.0

Total Depth 4534 Chlorides 800 ppm System LCM 4

Blow Description IF: Blow built to 9½"

ISI: Blowback built to ⅛"

FF: Blow built to BOB(11") at 23 min., built to 17½"

FSI: Blowback built to ¼"

Rec	127	Feet of	GCO	15	%gas	85	%oil	%water	%mud
Rec	120	Feet of	GCO	53	%gas	47	%oil	%water	%mud
Rec	59	Feet of	MCGO	15	%gas	75	%oil	%water 10	%mud
Rec	59	Feet of	OCM		%gas	10	%oil	%water 90	%mud
Rec		Feet of	GIP=250'		%gas		%oil	%water	%mud
Rec		Feet of			%gas		%oil	%water	%mud
Rec		Feet of			%gas		%oil	%water	%mud

Rec Total 365 BHT 137 Gravity 25.2 API RW ____ @ ____ °F Chlorides ____ ppm

Initial Hydrostatic 2246

Initial Flow 22 to 52

Initial Shut-In 1238

Final Flow 59 to 97

Final Shut-In 1144

Final Hydrostatic 2231

T- On Location 18:50

Initial Flow 15 T-Started 19:18

Initial Shut-In 30 T-Open 21:35

Final Flow 45 T-Pulled 00:09

Final Shut-In 60 T-Out 3:00

- ☑ Test 1950
- ☑ Jars 300
- ☐ Circ Sub
- ☐ Hourly Standby
- ☑ Mileage 112RT 196
- ☐ Sampler
- ☐ Straddle
- ☐ Shale Packer
- ☐ Extra Packer
- ☐ Extra Recorder
- ☐ Day Standby
- ☐ Ruined Shale Packer
- ☐ Ruined Packer
- ☐ Hotel
- ☐ EM Tool Successful First half
- ☐ Accessibility -175
- ☐ Gas Sample
- ☐ Oversized Hole
- ☐ Sub Total -175
- ☐ Total 2271
- ☐ Tool Loaded ____ @ ____
- ☐ MP/DST Disc't

Comments

Approved By ____ Our Representative James Tinker

Trilobite Testing Inc. shall not be liable for damage of any kind of property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70949

Well Name & No. HFI #1-27 Test No. 4 Date 3-5-24

Company Downing-Nelson Oil Co. Inc Elevation 3369 KB 3361 GL

Address PO Box 1019 Hays, KS 67601

Co. Rep / Geo Marc Downing Rig Duke #5

Location: Sec. 27 Twp 4S Rge. 36W Co. Rawlins State KS

Interval Tested 4606-4644 Zone Tested Pawnee

Anchor Length 38 Drill Pipe Run 4415 Mud Wt. 9.3

Top Packer Depth 4601 Drill Collars Run 176 Vis 52

Bottom Packer Depth 4606 Wt. Pipe Run - WL 8.0

Total Depth 4644 Chlorides 900 ppm System LCM 4

Blow Description IF: Blow built to BOB (11") at 1½ min., built to 72½"

ISI: Blowback built to BOB in 10 min. built to 21"

FF: Blow built to BOB at 2½ min., built to 77"

FSI: Blowback built to BOB at 22 min, built to 31"

Rec 5	Feet of CO		5	%gas	95	%oil		%water	%mud
Rec Rev Out 1190	Feet of Samples every 5 min			%gas		%oil		%water	%mud
Rec	Feet of 5 min - 15 min	60	32	%gas	66	%oil		%water	2 %mud
Rec	Feet of 20 min - 30 min	60	17	%gas	80	%oil		%water	3 %mud
Below Sub Rec 118	Feet of MO		5	%gas	50	%oil		%water	45 %mud
Rec	Feet of GIP = 1625'			%gas		%oil		%water	%mud
Rec	Feet of			%gas		%oil		%water	%mud

Rec Total 1313 BHT 149 Gravity ~~24.6~~ 25.6 API RW ____ @ ____ °F Chlorides ____ ppm

Initial Hydrostatic 2331

Initial Flow 185 to 267

Initial Shut-In 1230

Final Flow 311 to 474

Final Shut-In 1229

Final Hydrostatic 2165

T- On Location 19:15

Initial Flow 15 T-Started 20:00

Initial Shut-In 30 T-Open 22:30

Final Flow 30 T-Pulled 00:47

Final Shut-In 60 T-Out 5:00

☑ Test	1950	☐ Ruined Shale Packer	
☑ Jars	300	☐ Ruined Packer	
☑ Circ Sub DB	50	☐ Hotel	
☐ Hourly Standby		☐ EM Tool Successful	-350
☑ Mileage 112 RT	196	☐ Accessibility	
☐ Sampler		☐ Gas Sample	
☐ Straddle		☐ Oversized Hole	
☐ Shale Packer		☐ Sub Total	0
☐ Extra Packer		☐ Total	2146
☐ Extra Recorder		☐ Tool Loaded	@
☐ Day Standby		☐ MP/DST Disc't	

Comments

Approved By ____ Our Representative James Winder

Trilobite Testing Inc. shall not be liable for damage of any kind of property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70950

Well Name & No. HFI #1-27 Test No. 5 Date 3-6-24

Company Downing-Nelson Oil Co. Inc Elevation 3369 KB 3361 GL

Address PO Box 1019 Hays KS 67601

Co. Rep / Geo Marc Downing Rig Duke #5

Location: Sec. 27 Twp 4s Rge. 36w Co. Rawlins State KS

Interval Tested 4701-4745 Zone Tested Cherokee Lime

Anchor Length 44 Drill Pipe Run 4509 Mud Wt. 9.4

Top Packer Depth 4696 Drill Collars Run 176 Vis 71

Bottom Packer Depth 4701 Wt. Pipe Run - WL 7.8

Total Depth 4745 Chlorides 1000 ppm System LCM 2

Blow Description IF: Blow built to BOB(11") at 1¾", built to 69¾"

ISI: Blowback built to 6"

FF: Blow built to BOB at 3¼ min, built to 88¼"

FSI: Blowback built to BOB in [illegible] min, built to 18¼"

Rec 65	Feet of CGO	17 %gas	83 %oil	%water	%mud	
Rec Rev Out 1377	Feet of Samples Every 5min	%gas	%oil	%water	%mud	
Rec	Feet of 5-20min CGO	37 %gas	63 %oil	%water	%mud	
Rec	Feet of 25-35min CGO	21 %gas	79 %oil	%water	%mud	
Under Sub Rec 118	Feet of GOCM	12 %gas	19 %oil	%water 69	%mud	
Rec	Feet of GIP=940'	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 1560 BHT 151 Gravity 26 API RW ____ @ ____ °F Chlorides ____ ppm

Initial Hydrostatic 2293

Initial Flow 137 to 284

Initial Shut-In 1484

Final Flow 304 to 555

Final Shut-In 1437

Final Hydrostatic 2286

T- On Location 19:00

Initial Flow 15 T-Started 19:57

Initial Shut-In 30 T-Open 22:26

Final Flow 30 T-Pulled 00:45

Final Shut-In 60 T-Out 5:25

☑ Test	1950	☐ Ruined Shale Packer	
☑ Jars	300	☐ Ruined Packer	
☑ Circ Sub DB	50	☐ Hotel	
☐ Hourly Standby		☐ EM Tool Successful	-350
☑ Mileage 118 RT	196	☐ Accessibility	
☐ Sampler		☐ Gas Sample	
☐ Straddle		☐ Oversized Hole	
☐ Shale Packer		☐ Sub Total	-350
☐ Extra Packer		☐ Total	2146
☐ Extra Recorder		☐ Tool Loaded	@
☐ Day Standby		☐ MP/DST Disc't	

Comments

Approved By ____ Our Representative James Wieden

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Marc A. Downing
Consulting Petroleum
Geologist

Geological Report

Drilling Time and Sample Log

Operator	Downing-Nelson Oil Co., Inc.	Elevation	
Lease	HFI #1-27	KB	3369
API #	15-153-21324-0000	DF	3367
Field	Wildcat	GL	3358
Location	2000' FNL & 1699' FWL	Casing Record	
Sec. 27 / Twp. 4s / Rge. 36w		Surf.	8 5/8" @ 478'
County Rawlins	State Kansas	Prod.	5 1/2" @ 4948'
Electrical Surveys	CNDL, DIL, MEL, Sonic		

Formation	Sample Tops	Log Tops	Datum	Struct Comp
Top Anhydrite	3107	3106	263	-1
Base Anhydrite	3144	3143	226	FL
Foraker	3771	3770	-401	-5
Topeka	4049	4047	-678	-7
Heebner	4212	4210	-841	-4
LKC	4258	4256	-887	-3
Stark	4457	4455	-1086	-1
BKC	4508	4505	-1136	FL
Pawnee	4630	4628	-1259	-1
Cherokee Sh	4707	4704	-1335	FL
Morrow	4861	4860	-1491	-1
Miss	4927	4924	-1555	-21
Total Depth	4989	4988	-1619	

Refrence Well for Structural Comparison: DNOCI - Welter #1-28

1341' FNL & 1163' FEL Sec. 28-4s-36w

Drilling Contractor	Duke Drilling, Rig #5		
Commenced	2/26/2024		
Completed	3/8/2024		
Samples Saved From	4050'	To	RTD
Drilling Time Kepth From	3650'	To	RTD
Samples Examined From	4050'	To	RTD
Geological Supervision From	4050'	To	RTD

Summary and Recommendations

Due to structural position, DST recovery, and log evaluations, it was decided to set 5 1/2" production casing for completion.

Respectfully Submitted

Marc A. Downing